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Hiroshi Uchara

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FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

CHIN, HUI H

ART UNIT

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DELIVERY MODE

12/11/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. The office action is in reference to the Amendment, filed on 7/6/2009. Claim 1 has been amended. Claims 1-9 are now pending.
2. In view of the Response, the previous rejections of claims 1 under 35 U.S.C. 103(a) as being unpatentable over Tasaka et al. (JP 2002-322321) in view of Lai et al. (US Patent 5,272,236) and claims 2-9 under 35 U.S.C. 103(a) as being unpatentable over Ahmed et al. (US Patent 6,184,291) in view of Tasaka et al. (JP 2002-322321) are withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1, 3-6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tasaka et al. (JP 2002-322321).

Tasaka et al. disclose an elastomer composition comprising: a) 100 parts by weight of at least one elastomer selected from the group consisting of a block copolymer comprising at least two of a polymer block A mainly consisting of an aromatic

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vinyl compound and at least one of a polymer block B mainly consisting of a conjugated diene compound, a hydrogenated block copolymer which is a hydride of the block copolymer and an olefinic copolymer rubber, b) 0.1-250 parts by weight of an amorphous polyolefin, c) 1-100 parts by weight of an oil, and d) 1-100 parts by weight of an olefin system, wherein the block copolymer is styrene butadiene styrene (SBS); the copolymer rubber is ethylene-1-butene; and the olefin system is atactic polypropylene (claims; [0025]; [0034]; [0043]; [0048]). Attention is directed to Example 6, wherein it demonstrates a composition comprising 35 parts by weight of SBS, 45 parts by weight of ethylene-butene rubber, 17.5 parts by weight of oil, 17.5 parts by weight of paraffin, and 20 parts by weight of polypropylene. The ratio of melt flow rates and molecular weight distribution are inherent properties.

However, Tasaka et al. are silent on the specific amount of 1-butene in the ethylene/1-butene random copolymer. The specific amount of 1-butene is dependant on the ratio of ethylene to 1-butene in the random copolymer. By adjusting the ratio of ethylene to 1-butene the hydrophobicity and branching will be affected. By increasing the amount of 1-butene the hydrophobicity will be reduced and the branching will be increased. The case law has held that “a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation”. *In re Antoine*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). Thus, it would have been obvious to one of ordinary skill in the art at the

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time the invention was made to achieve the relative amount of 1-butene via the routine optimization process and thereby obtain the present invention.

The limitations of claims 3-5 can be found in Tasaka et al. at [0079], where it discloses molding operations.

The limitations of claim 6 can be found in Tasaka et al. at [0079], where it discloses multilayer goods.

The limitations of claim 9 can be found in Tasaka et al. at [0079], where it discloses household appliance.

4. Claims 2, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tasaka et al. (JP 2002-322321) in view of Ahmed et al. (US Patent 6,184,291).

The disclosure of Tasaka et al. is adequately set forth in paragraph 3 and is incorporated herein by reference.

Tasaka et al. disclose the at least one styrene block copolymer is styrene/butadiene/styrene ([0003]). However, Tasaka et al. are silent on the specific density, MFR, and a molecular weight distribution of ethylene/1-butene random copolymer.

Ahmed et al. disclose an elastomeric composition comprising: a) from about 70 to about 90 percent by weight of a styrene triblock copolymer, b) from about 10 to about 30 percent by weight of an ethylene interpolymers characterized as an interpolymers of ethylene with at least one C₃-C₂₀ α -olefin wherein this interpolymers is ethylene/1-butene

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having a density of about 0.875 g/cm³ to about 0.905 g/cm³, an MFR of about 1 to 10 g/10 min, and a molecular weight distribution of about 1.5 to about 2.5 (claims 1, 2, col. 6, lines 13-18; col. 9, lines 12-16; col. 11, lines 46-47; col. 12, lines 4-5, and lines 37-38), and Ahmed et al. further disclose the use of extender oils (col. 15 lines 53-55), to provide a thermoplastic elastomeric compositions comprising block copolymers in blend combination with substantially inert ethylene interpolymers (col. 1, lines 23-26). This composition can be fabricated into articles such as fibers, films, coatings and moldings (col. 15 lines 65-66). In light of such benefit, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use this specific ethylene/1-butene random copolymer with the expected success.

Response to Arguments

5. Applicants' arguments filed 7/6/2009 have been fully considered and are not persuasive.

The arguments have been addressed in the rejections above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUI CHIN whose telephone number is (571)270-7350. The examiner can normally be reached on Monday to Friday; 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Ling-Siu Choi/
Primary Examiner, Art Unit 1796

/HC/